

WHAT IS CLAIMED IS:

- 1 1. A radio communication system characterized by
2 comprising a base station (3) conforming to a desired radio
3 communication node and a terminal station (2-1 to 2-n : n
4 denotes a natural number) for making communications with said
5 base station (3) through the use of said radio communication
6 node,
- 7 said base station including:
- 8 a compensation parameter generating section (33-6)
9 for generating a compensation parameter needed for
10 compensating for a possible error in detection of a received
11 signal strength indicator, occurring in said terminal station
12 (2-i : i = 1 to n) stemming from a difference in transmission
13 signal waveform to said terminal station (2-i); and
14 a transmitting section (33-7) for transmitting said
15 compensation parameter generated by said compensation
16 parameter generating section (33-6), to said terminal station,
- 17 said terminal station including:
- 18 a received signal strength indicator detecting
19 section (22-10) for detecting a received signal strength
20 indicator of a transmission signal from said base station
21 (3) through the use of a required amplifier (100); and
22 a received signal strength indicator compensating
23 section (23-5) for compensating for, on the basis of said
24 compensation parameter from said base station (3), the error
25 in the received signal strength indicator detection in said
26 received signal strength indicator detecting section (22-10),

27 occurring according to the difference in transmission signal
28 waveform due to an input-waveform-dependent input-output
29 characteristic of said amplifier (100).

1 2. A radio communication system according to claim
2 1, characterized in that, in a case in which said radio
3 communication node is a code division multiple access
4 communication node and a waveform of a multiplexed signal
5 to be transmitted to said terminal station (2-i) varies
6 according to the number of multiplexes in said multiplexed
7 signal,

8 said compensation parameter generating section (33-6)
9 of said base station includes:

10 a multiplex number detecting section (33-4, 33-4A
11 or 33-4B) for detecting information on the number of
12 multiplexes in a transmission multiplexed signal to said
13 terminal station;

14 a first correction memory section (33-5) for
15 previously storing a correction quantity on a received signal
16 strength indicator on the basis of a difference in number
17 of multiplexes of said transmission multiplexed signal; and

18 a first memory control section (33-4, 33-4A or
19 33-4B) for reading out, from said first correction memory
20 section (33-5), a correction quantity corresponding to said
21 information on the number of multiplexes detected by said
22 multiplex number detecting section as said compensation
23 parameter for said terminal station, and

20072056-020002

24 said received signal strength indicator compensating
25 section (23-5) of said terminal station (2-i) includes:

26 a correction quantity receiving section (232a) for
27 receiving said correction quantity from said base station;
28 and

29 a first detected signal strength indicator
30 correcting section (23-4) for correcting said received signal
31 strength indicator, detected by said received signal strength
32 indicator detecting section, according to said correction
33 quantity received by said correction quantity receiving
34 section.

1 3. A radio communication system according to claim
2 1, characterized in that, in a case in which said radio
3 communication node is a code division multiple access
4 communication node and a waveform of a multiplexed signal
5 to be transmitted to said terminal station varies according
6 to the number of multiplexes in said multiplexed signal,
7 said compensation parameter generating section (33-6)
8 of said base station (3) includes:

9 a multiplex number detecting section (33-4, 33-4A
10 or 33-4B) for detecting information on the number of
11 multiplexes of a transmission multiplexed signal to said
12 terminal station (2-i) as a compensation parameter for said
13 terminal station (2-i), and

14 said received signal strength indicator compensating
15 section (23-5) of said terminal station (2-i) includes:

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16 a multiplex number receiving section (232c) for
17 receiving said information on the number of multiplexes from
18 said base station;

19 a second correction memory section (23-6) for
20 previously storing a correction quantity on a received signal
21 strength indicator on the basis of a difference in number
22 of multiplexes in said transmission signal;

23 a second memory control section (232c) for reading
24 out a correction quantity corresponding to said information
25 on the number of multiplexes, received by said multiplex number
26 receiving section (232c), from said second correction memory
27 section (23-6); and

28 a second detected signal strength indicator
29 correcting section (23-4) for correcting said received signal
30 strength indicator, detected by said received signal strength
31 indicator detecting section, according to said correction
32 quantity read out by said second memory control section (232c).

1 4. A radio communication system according to claim-
2 1, characterized in that, in a case in which said radio
3 communication node is a code division multiple access
4 communication node and a waveform of a multiplexed signal
5 to be transmitted to said terminal station (2-i) varies
6 according to the number of multiplexes in said multiplexed
7 signal,

8 said compensation parameter generating section (33-6)
9 of said base station (3) includes:

10 a multiplex number detecting section (33-4, 33-4A
11 or 33-4B) for detecting information on the number of
12 multiplexes of a transmission multiplexed signal to said
13 terminal station (2-i) as said compensation parameter, and
14 said received signal strength indicator compensating
15 section (23-5) of said terminal station (2-i) includes:
16 a multiplex number receiving section (232c) for
17 receiving said information on the number of multiplexes from
18 said base station (3); and
19 a third detected signal strength indicator
20 correcting section (23-4') for correcting a received signal
21 strength indicator detected by said received signal strength
22 indicator detecting section (22-10) on the basis of said
23 information on the number of multiplexes received by said
24 multiplex number receiving section (232c) through the use
25 of a predetermined arithmetic operation.

1 5. A radio communication system according to claim
2 1, characterized in that, in a case in which each of said
3 base station (3') and said terminal station (2'-i) conforms
4 to a plurality of types of modulation modes and a waveform
5 of said transmission signal varies according to said
6 modulation modes,
7 said compensation parameter generating section (33-6)
8 of said base station (3') is designed to generate information
9 on a modulation mode for said transmission signal as said
10 compensation parameter, and

20072056-020002

11 said received signal strength indicator compensating
12 section (23-5) of said terminal station (2'-i) is designed
13 to correct an error in detection of a received signal strength
14 indicator, which occurs according to a difference in
15 transmission signal modulation mode due to an
16 input-waveform-dependent input-output characteristic of
17 said amplifier (100), on the basis of said information on
18 transmission signal modulation mode from said base station
19 (3').

1 6. A received signal strength indicator compensating
2 method for use in a radio communication system comprising
3 a base station (3) conforming to a desired radio communication
4 node and a terminal station (2-i) for making communications
5 with said base station (3) through the use of said radio
6 communication node,

7 characterized by comprising:
8 broadcasting a compensation parameter needed for
9 compensating for a possible error in detection of a received
10 signal strength indicator, occurring in said terminal station
11 (2-i) stemming from a difference in waveform of a transmission
12 signal from said base station (3) to said terminal station
13 (2-i); and

14 in said terminal station (2-i), detecting a
15 received signal strength indicator of said transmission
16 signal through the use of a required amplifier (100), and
17 compensating for, on the basis of said compensation parameter

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18 broadcasted from said base station (3), the error in the
19 received signal strength indicator detection occurring
20 according to the difference in transmission signal waveform
21 due to an input-waveform-dependent input-output
22 characteristic of said amplifier (100).

1 7. A base station for use in a radio communication
2 system (1), said base station (3) conforming to a desired
3 radio communication node and making communications with a
4 terminal station (2-i) through the use of said radio
5 communication node, characterized by comprising:

6 a compensation parameter generating section (33-6) for
7 generating a compensation parameter needed for compensating
8 for a possible error in detection of a received signal strength
9 indicator, occurring in said terminal station stemming from
10 a difference in transmission signal waveform to said terminal
11 station (2-i); and

12 a transmitting section (33-7) for transmitting said
13 compensation parameter generated by said compensation
14 parameter generating section (33-6), to said terminal
15 station.

1 8. A base station for use in a radio communication
2 system according to claim 7, characterized in that, in a case
3 in which said radio communication method is a code division
4 multiple access communication method and a waveform of a
5 multiplexed signal to be transmitted to said terminal station
6 (2-i) varies according to the number of multiplexes in said

10072056-020302

7 multiplexed signal, said compensation parameter generating
8 section (33-6) includes:

9 a multiplex number detecting section (33-4, 33-4A or
10 33-4B) for detecting information on the number of multiplexes
11 in a transmission multiplexed signal to said terminal station;

12 a first correction memory section (33-5) for previously
13 storing a correction quantity on a received signal strength
14 indicator on the basis of a difference in number of multiplexes
15 of said transmission multiplexed signal; and

16 a first memory control section (33-4, 33-4A or 33-4B)
17 for reading out, from said first correction memory section
18 (33-5), a correction quantity corresponding to said
19 information on the number of multiplexes detected by said
20 multiplex number detecting section (33-4, 33-4A or 33-4B)
21 as said compensation parameter for said terminal station
22 (2-i).

1 9. A base station for use in a radio communication
2 system according to claim 7, characterized in that, in a case
3 in which said radio communication node is a code division
4 multiple access communication node and a waveform of a
5 multiplexed signal to be transmitted to said terminal station
6 (2-i) varies according to the number of multiplexes in said
7 multiplexed signal, said compensation parameter generating
8 section (33-6) includes:

9 a multiplex number detecting section (33-4, 33-4A or
10 33-4B) for detecting information on the number of multiplexes

10072056 020802

11 of a transmission multiplexed signal to said terminal station
12 (2-i) as a compensation parameter for said terminal station
13 (2-i).

1 10. A base station for use in a radio communication
2 system according to claim 7, characterized in that, in a case
3 in which said radio communication node is a code division
4 multiple access communication node and a waveform of a
5 multiplexed signal to be transmitted to said terminal station
6 (2-i) varies according to the number of multiplexes in said
7 multiplexed signal, said compensation parameter generating
8 section (33-6) includes:

9 a multiplex number detecting section (33-4, 33-4A or
10 33-4B) for detecting information on the number of multiplexes
11 of a transmission multiplexed signal to said terminal station
12 (2-i) as a compensation parameter for said terminal station
13 (2-i).

1 11. A base station for use in a radio communication
2 system according to any one of claims 8 to 10, characterized
3 in that a plurality of transmission data generating sections
4 (331-i) are provided to generate transmission data to be
5 multiplexed as said transmission multiplexed signal, and
6 said multiplex number detecting section (33-4) includes:

7 an enable signal counting section (337) for
8 counting the number of enable signals for said transmission
9 data generating sections (331-i) to detect said information
10 on the number of multiplexes.

20072056-020002

1 12. A base station for use in a radio communication
2 system according to claim 11, characterized in that said
3 plurality of transmission data generating sections (331-i)
4 are separated into a plurality of groups,
5 said enable signal counting (337) is provided for each
6 of said groups to count the number of enable signals in units
7 of said groups, and
8 an adding section (338) is provided to add up the count
9 results in said enable signal counting sections for output
10 said information on the number of multiplexes.

1 13. A base station for use in a radio communication
2 system according to claim 11, characterized in that said enable
3 signal counting section (337) uses each of said enable signals
4 for said plurality of transmission data generating sections
5 (331-i) as a read address signal, and
6 a multiplex number detection memory section (340) is
7 provided which previously stores said information on the
8 number of multiplexes in an address area corresponding to
9 said read address signal.

1 14. A base station for use in a radio communication
2 system according to claim 7, characterized in that, in a case
3 in which each of said base station (3') and said terminal
4 station (2'-i) conforms to a plurality of types of modulation
5 modes and a waveform of said transmission signal varies
6 according to said modulation modes,

10072056.020802

7 said compensation parameter generating section (33-6)
8 is designed to generate information on a modulation mode for
9 said transmission signal as said compensation parameter.

1 15. A terminal station for use in a radio communication
2 system (1), said terminal station (2-i) conforming to a desired
3 radio communication node and making communications with a
4 base station (3) through the use of said radio communication
5 node, characterized by comprising:

6 a received signal strength indicator detecting section
7 (22-10) for detecting a received signal strength indicator
8 of a transmission signal from said base station (3) through
9 the use of a required amplifier (100); and

10 a received signal strength indicator compensating
11 section (23-5) for compensating for, on the basis of a
12 compensation parameter needed for compensation for a possible
13 error in detection of a received signal strength indicator
14 occurring due to a difference in waveform of said transmission
15 signal and generated in said base station (3) and transmitted
16 therefrom, the error in the received signal strength indicator
17 detection in said received signal strength indicator
18 detecting section, occurring according to the difference in
19 the transmission signal waveform due to an
20 input-waveform-dependent input-output characteristic of
21 said amplifier (100).

1 16. A terminal station for use in a radio communication
2 system according to claim 15, characterized in that, in a

10072056.020802

3 case in which said radio communication node is a code division
4 multiple access communication node and a waveform of a
5 multiplexed signal to be transmitted from said base station
6 (3) varies according to the number of multiplexes in said
7 multiplexed signal, with a received signal strength indicator
8 correction quantity to be taken according to a difference
9 in the number of multiplexes in said transmission multiplexed
10 signal being transmitted as said compensation parameter from
11 said base station (3),

12 said received signal strength indicator compensating
13 section (23-5) includes:

14 a correction quantity receiving section (232a) for
15 receiving said correction quantity from said base station;
16 and

17 a first detected signal strength indicator
18 correcting section (23-4) for correcting said received signal
19 strength indicator, detected by said received signal strength
20 indicator detecting section (22-10), according to said
21 correction quantity received by said correction quantity
22 receiving section (232a).

1 17. A terminal station for use in a radio communication
2 system according to claim 15, characterized in that, in a
3 case in which said radio communication node is a code division
4 multiple access communication node and a waveform of a
5 multiplexed signal to be transmitted from said base station
6 (3) varies according to the number of multiplexes in said

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7 multiplexed signal, with information on the number of
8 multiplexes in said transmission multiplexed signal being
9 transmitted as said compensation parameter from said base
10 station (3),

11 said received signal strength indicator compensating
12 section (23-5) includes:

13 a multiplex number receiving section (232c) for
14 receiving said information on the number of multiplexes from
15 said base station;

16 a second correction memory section (23-6) for
17 previously storing a correction quantity on a received signal
18 strength indicator on the basis of a difference in number
19 of multiplexes in said transmission signal;

20 a second memory control section (232c) for reading
21 out a correction quantity corresponding to said information
22 on the number of multiplexes, received by said multiplex number
23 receiving section (232c), from said second correction memory
24 section (23-6); and

25 a second detected signal strength indicator
26 correcting section (23-4) for correcting said received signal
27 strength indicator, detected by said received signal strength
28 indicator detecting section (22-10), according to said
29 correction quantity read out by said second memory control
30 section (232c).

1 18. A terminal station for use in a radio communication
2 system according to claim 15, characterized in that, in a

10072055-020802

3 case in which said radio communication node is a code division
4 multiple access communication node and a waveform of a
5 multiplexed signal to be transmitted from said base station
6 (3) varies according to the number of multiplexes in said
7 multiplexed signal, with information on the number of
8 multiplexes in said transmission multiplexed signal being
9 transmitted as said compensation parameter from said base
10 station (3),

11 said received signal strength indicator compensating
12 section (33-6) includes:

13 a multiplex number receiving section (232c) for
14 receiving said information on the number of multiplexes from
15 said base station (3); and

16 a third detected signal strength indicator
17 correcting section (23-4') for correcting a received signal
18 strength indicator detected by said received signal strength
19 indicator detecting section (22-10) on the basis of said
20 information on the number of multiplexes received by said
21 multiplex number receiving section (232c) through the use
22 of a predetermined arithmetic operation.

1 19. A terminal station for use in a radio communication
2 system according to claim 15, characterized in that, in a
3 case in which said base station (3') conforms to a plurality
4 of types of modulation modes and a waveform of said transmission
5 signal varies according to said modulation modes, with said
6 base station (3') being made to generate information on a

20072055-020302

7 modulation mode for said transmission signal as said
8 compensation parameter,
9 said received signal strength indicator compensating
10 section (23-5) is made to compensate for an error in received
11 signal strength indicator detection occurring due to a
12 difference in modulation mode for said transmission signal
13 stemming from an input-waveform-dependent input-output
14 characteristic of said logarithmic amplifier (100), on the
15 basis of said information on the modulation mode for said
16 transmission signal from said base station (3').

20072056-0208002